

Appl. No. 09/779,791
Amdt. dated June 30, 2005
Reply to Office action of April 6, 2005

REMARKS

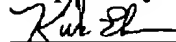
Rejection of the claims under 35 USC § 112:

Claim 1 has been rejected under 35 U.S.C. 112, first paragraph. The action states that the recitation of "enhances retention of said molecule inside said cell" is considered new matter. The Examiner points out, and the Applicants agree, that the nature of the bond does not have a direct effect on the properties of retention of the molecule itself inside the cell. It is the cleavage of the linkage between the molecule and the transduction signal that effectively enhances retention of the molecule in the cell. Applicants have observed that a transduction signal will transport a molecule to which it is attached across a membrane in either direction, i.e., into or out of a cell. Therefore, when the concentration of the transduction signal-molecule conjugate (composition) is higher outside the cell, one will observe a net influx of the composition into the cell. However, once the extracellular composition is removed, one observes a net efflux of the composition from the cell (see example 10, beginning on page 38). By providing an activated disulfide bond between the molecule and the transduction signal, once the linkage is cleaved, subsequent transduction signal-mediated transport of the molecule across a membrane is eliminated. When the linkage is cleaved inside a cell, transport of the molecule back outside the cell (across the membrane) by the transduction signal is eliminated. Enablement of this effect is provided for cells in vitro in example 10. Applicants have amended claim 1 to more clearly claim the subject matter which Applicants regard as their invention. Support for transient attachment of two molecules by an activated disulfide bond is provided in the specification on page 1 lines 9-11 and page 19 lines 29-31. Support for delivering a molecule to a cell by linking the molecule to a transduction signal via a disulfide bond is provided in the specification on page 3 lines 3-5, page 25 lines 1-2, page 25 lines 18-21, page 25 line 29 to page 26 line 10, page 29 lines 8-10, and page 39 lines 17-19. Support for cleavage of the disulfide bond releasing the molecule is provided in the specification on page 1 lines 12-13. Applicants request reconsideration of the § 112 rejection.

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The Examiner's rejections are now believed to be overcome by this response to the Office Action. In view of Applicants' amendment and arguments, it is submitted that claims 1-6 and 13 should be allowable. Applicants respectfully request a timely Notice of Allowance be issued in the case.

Respectfully submitted,



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I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as express mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this date: 4/29/05


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